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Overcoming European Language Barriers
A New Foundation for Text Analysis

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Abstract The significance of textual expressions resides not in the physical reality of a produced grapheme, but in the hypothetical fraction or share, related to a string of graphemes. It follows that a text producerôs *intention* must be mediated through an exchange of virtual properties within flow fields. Since a flow field itself is made up of rotating strings that mediate all intentions, grapheme displacement must take into account all deviations from uniformity in space and time. Stated in geometrical terms, the intrinsic property of the graphemes is assembled rhytmically and in a clocking mode. However, string movement must also be connected to a stepwise cyclic (κ_i) production of string-grapheme compounds, which leads to the introduction of composites for which the range of a work-cycle determines cyclic returns. With the flow fields as intermediate links, this measure generates the ground for the processing of phase-dependencies. Moreover, evolutionary changes appear in the composites, i.e., with each other integrated strings and graphemes. This kind of integration generates layered composites as the units of evolution. Produced by the AaO-formalism, individual string movements on the micro-level allow their coupling with global trends at the macro-level. In applying the procedures, outlined in the manuals of Perspective Text Analysis (PTA), it will be made evident that state attractions can be established. Finally, by means of the reversibly synthesizing AaO mechanism it is shown that European language barriers can be overcome. As a result a deeply ingrained structural commonalty is made evident.

Most of all, it is worthwhile to stress the fact that a search on the internet for titles on ócontent analysisô and ósemanticsô gives thousands of references to books and articles on the analysis of language. However, these contain discussions of what content is or might be or how language studies and semantics have been conceived by philosophers, anthropologists, physicians, psychiatrists, lawyers, and cognitive scientists as well. In strictly technical terms, the aim of the present approach is to go beyond the classical strategies and to provide researchers and students of language-dependent studies with a concise operational design which gets *intention* (Kelso, 1995, p. 137) under experimental control and makes the content analytical problem of *incompleteness* (Raff, 1996, p. 107) approachable.

The underlying model and the methods for abstracting information from verbal data are new in the sense that they are founded on the Agent-action-Objective (AaO) principle. Furthermore, in advancing the bio-kinetic hypothesis that the developed [AaO] mechanisms provide basic conditions which are necessary for an alternative language description, a connection of the involved verbal flows is made with real physics. What is in the link is provided with an application of the work of Hestenes (1986/1993) to the components of the [AaO] system and consequently the calculation of rotational pattern dynamics.

In departing from the biophysical hypothesis that a *molecule* may consist of a *reversible synthesizing rotary motor* (Kinosita, 1999; Hernández, Kay & Leigh, 2004) it is suggested that one or more A- and O-molecules may rotate against the others. With this theory as background, it will be demonstrated that language can be treated as a bio-

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kinematical system which is exhibiting periodic behaviour. Though, it is not too difficult to imagine that the proposal of rotating A- and O-components, forming a language space, may cause conservative reactions. Furthermore, in applying the procedures, outlined in the manuals of PTA/Vertex, it will become evident that a state dependent quality (Q) parameter can be established. Together with the manuals, corresponding evidence has been summarized in a number of publications which are to be found in the reference list at the end of this paper.

Since proper methods have been absent, synthesis has likewise remained undiscoverable. Hence, it has been impossible to go beyond classical content analysis (B. Bierschenk & I. Bierschenk, 1976) and to take advantage of the *real time imaging* of verbal flows (B. Bierschenk, 2002). Even the idea of approaching interval-dependent verbal flows has been unthinkable. Why is it so? Well, when it comes to language in general and to approach text in particular, the common view on language on one hand and text processing on the other is raising barriers. The fundamental hurdles have been outlined in B. Bierschenk (1981). There it is shown that the obstacles are residing in conceived paradigmatic peculiarities, corresponding to basic scientific positions. Figure 1 is summarizing the paradigmatic peculiarities.

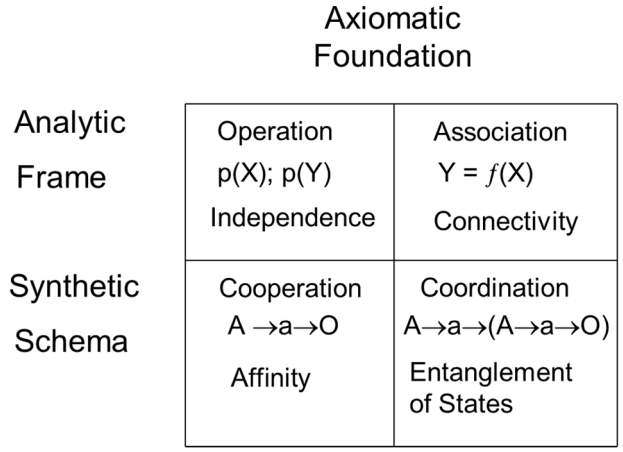


Figure 1 *The concepts of frame and schema*

The *frame* hypothesis is commonly conceived as the ideal starting point for analytic operations and the exploration of associative connections in the human brain (Pribram, 1971). Especially with reference to the [p(X)] proposition, where (p) stands for the predicate and (X) for the argument, there are, besides Kantôs reflections on the analytical propsition, no signs of a critical discussion of the proposed connectivity in the neuronal machinery of the brain. It may sound provocative but the Kantian Schema axiom competes successfully with all simple linear system approaches, by which emphasis is placed on normative theories, classification and organisation, as used in the collection of variables for the set-up of complex catalogues of indicators. Even though so called qualitative methods have been developed, they suffer from the same methodological deficit, that is, the failure to observe intention time-dependent and to measure the phenomenon with precision. To conclude, the problem of analyzing text, as approached by some writers, is conventionally solved with analytical models and/or statistical procedures, which all require linear methodologies.

The notion óschemaô in Figure 1 may cause some confusion, because it is often used by representatives of various scientific fields with the unambiguous sense of óframeô. For example, it can be seen applied within computer science and linguistics, with the notion ósentence schemaô, which means something constructed to make visible syntactic patterns.

However, their schema concept is a data holding device (Minsky, 1968) and builds on semantic decisions of which words take which positions. What is intended with this remark is a link to the axiomatic foundation of the classical frame approach and to compare it with the non-classical schema approach. The conception in Figure 1 is that a schema is axiomatic, something a priori, which cannot be constructed. As such it is structurally bound. The positions in operation are only two, either before the verb, the A-place, or after the verb, the O-place. The two positions form the widest possible openings for the revolving process to come about. In this way the schema is put into function by the model but is not the model.

According to this line of reasoning, *the AaO mechanism* is intertwined with natural language processing. On the other hand, relating natural language with a discourse analysis, means that a string of graphemes always is produced with a perspective that is unique to its originator. These processes are changing the internal constraints of the AaO system in space and time. This means that perspective shifts can be equated with temporal asymmetries.

Fundamental to Perspective Text Analysis (PTA) is that componential splitting implies valid observation concerning the evolutionary dynamics of language as well as the thermodynamic limits that are at work in text production. With reference to Figure 2, it is proposed that a single AaO unit may be split into subunits.

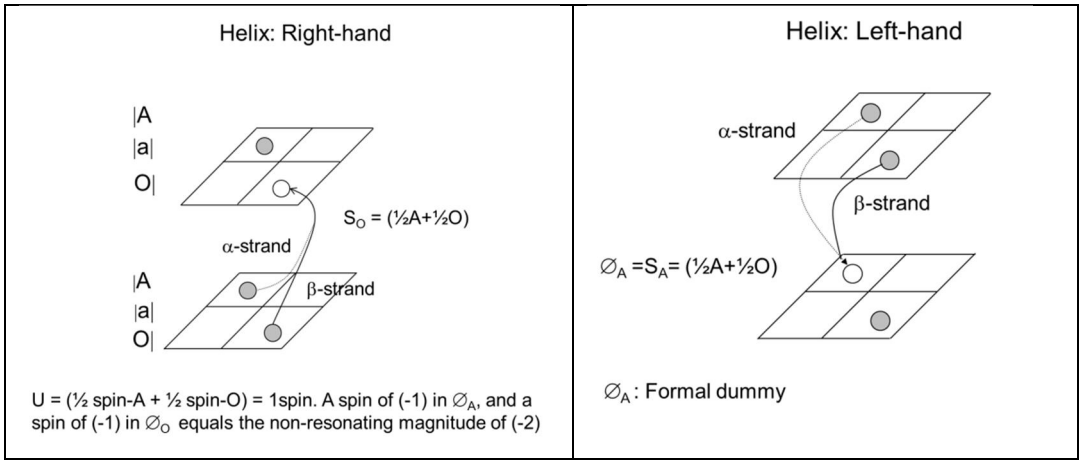


Figure 2 *Synthesizing rotation*

Further, Figure 2 is suggesting that one or more sub-units of the AaO mechanism rotate against the others. So, a reversible synthesizing rotary motor is anticipated which has the function of letting sub-components being transformed from one state into another state. In separating the dots in the first plane through the V-function, two types of dots can be identified: A filled dot, which relates to a string of graphemes, and a non-filled dot, which represents a virtual string. In capturing rotating strings through the Functional Clause (FC) (I. Bierschenk 1992), resonating grapheme properties need to be observed and measured by localising the strings on opposite dots. Furthermore, in using the gating function of FC as key, it is demonstrable that a non-filled dot has the function of a placeholder as shown in the first plane. Thus, placeholders perform the task of channelling the strings on a filled dot coherently into vertically aligned compositions. The production of compositions is explainable as a path, which is transited with various rotational speeds. The concept of a ócannelô allows for the introduction and definition of neighbourhood and distance. Gating leads to the generation of channels which is of particular import in the establishment of a language space and the demonstration of the evolutionary properties of composites. Moreover, channelling and the

formation of entangled states necessitate observations on the gradient dynamics in the developing sequencing space.

The primary focus in a functional string-grapheme approach and the subsequent expression of distance is the position of a grapheme composite. Since the expression of winding relates in the mathematical sense to the notion óattitudeô (Hestenes, 1986/1993, p. 420), evaluating angular articulations implies evaluating changes in attitude which can be demonstrated through reversible and irreversible synthesizing rotations. The fact that channelling leads to the generation of layered compositions has been used in the operational definition of the concepts of óspeedô and óaccelerationô. In the straightforward application of these concepts, it is possible to derive the dynamical properties of a composites from the recombination of the string spectrum. Moreover, locally constraint movement patterns can be evaluated on the basis of local fluctuations, which appear as global.

Now, if the context for componential rotation is conceived of as part of a resulting synthesis, related text generation may be viewed as the outcome of componential variability. Using component vectors directly means that *un-normalised* vectors are ñeliminating the computational cost of normalisationò (Hestenes, 1994, p. 72). It follows that the A- and O-spinors at the ecological level must reflect lawful regularities (B. Bierschenk, 2002).

Whenever two borders are defining the orientation in a rotational transition, the dots are operating in areas. From a kinematic point of view, the areas of an [AaO] unit are incorporating definite borders. This means that a unit is embracing spherical properties. But the determination of the orientation of the dotsô rotation within the spherical space is only achievable through their bonding to the Aôs and Oôs. In paraphrasing Mackenzie (1998): *the proof is in the bonding*!

When a component makes up the context, cooperation between intention, associated with [A] and orientation, associated with [O] is no longer the objective of the physical conditions of making experience. Instead, it is the hyperbolic determination of regional as well as global states of attraction. Thereby, new constraints are produced, which pass beyond the limit of their material sources. The major premise of the schema approach is that a componential rotation is always produced with a perspective that is unique to its originator. Thus, by processing selected discourses it becomes possible to represent their structures through óholophorsô (B. Bierschenk, 1991).

The Reversible Synthesizing Rotary AaO Mechanism

Understanding the AaO mechanism as a device for receiving and responding to string information may be facilitated, if a function space is imagined in which material and immaterial strings may emerge and end abruptly. This generates the discontinuities that can be imaged and put in relation to appropriate movements in a sequencing space. As Winfree (1980, p. 28) observed:

> *The science comes in locating and making use of the discontinuities and the discovering which of many alternative mechanisms underlie its particular character.*

Dissipative resistance of a pattern to stretching at the point of dispensation (a) involves two basic components, which are related to the field concept. A field is conceived of as (F (α, β, t)). This means that vector-valued state functions are operating on the field.

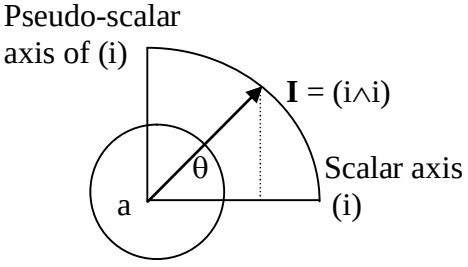
By definition, a flow field has to be fixed firmly to the producer of a change, i. e., to the (a) component of the AaO unit. It has already been indicated that this component is associated with distinct and identifiable strings of graphemes. An (a) string is invariably a marked string and therefore treated as a constant (I. Bierschenk, 1999/2003). On the basis of

this constant AaO affinity is recorded. Moreover, affinity relates to the strings of graphemes, associated with an α-variable as well as to the strings of graphemes, associated with a β-variable. Once an (αβ)-relationship has been established, it is possible to capture rotational specificity.

A differential treatment of the time- and state-determined conditions of the AaO mechanism is basic to the syntheszing operations of subtle but important variations in the rotations. The operations of the componential sub-units rest on the channelling activity (a) and an irreversible energy flow. In imaging string rotation and grapheme production, it is the task of the AaO mechanism to channel successfully a dynamic textual flow. The operation of perfect channelling is made dependent on the angle of a line segment (σ) which is originating in the dispension point (a). This line segment is taken to symbolise the affinity relation in the AaO unit and is kept to represent the line as a vector variable. Its positive orientation (o) will be indexed with (o=1). Both have been transformed into a rigorous behaving AaO system.

Imaging of Spinning Strings

In defining spinning strings, the first step must take into account the way in which conditionality is indexed and how the fundamental system property is imaged. In reference to Hestenesô (1986/93, p. 67) outline, it can be stated that a vector of positive orientation and of unit length (o=1) has the special algebraic property of being a bivector (o∧σ) = 1. Pre-multiplying a vector (σ) with a scalar (=1) or another vector, having the function of a scalar, results, according the Hestenes, in a bivector that ultimately takes part in the determination of the correctness in the energy flow. Thus, any local interaction between a text producer and an event can be represented as vector-valued state functions within a flow-field of unit length. The set-up of the identity function as basis for channelling has previously been symbolized (B. Bierschenk, 2005) and is now reproduced in Figure 4.



a: origin
Ia = a cos θ
sin θ = (i∧i) = a sin θ
I: Unit blade of the (i∧i) plane, i. e. the identity relation

Figure 4 *Diagram of the Spinor i-plane*

Since a string transformation implies a rotation of (σ_1) through the right angle (cos θ) it indicates that the multiplication by (i) of any vector rotates vectors counter-clockwise by a right angle. So the angle, specifying the degree of convexity of the imaged string rotation, means that the relation ($\sigma_1=\sigma_2$) has the same magnitude (=1) but is of orthogonal type. This measure is consistent with the Euclidean properties of physical space. In formal terms, establishing the bivector (**I**) would require the identity relation:

$$\mathbf{I}=a\theta. \qquad (1)$$

The symbol (a) in expression (1) is specifying the origin (zero) of the plane, while the angle $|\theta|$ is specifying its magnitude. Thus, the rotation of a particular string-grapheme composition is given by the defined óspinorô, which is a bivector of unit length ($|\mathbf{I}| =1$).

Any generation of strings and string-grapheme composites will be defined as writing, which can be expressed with the variable (a). But its operational definition requires that ódirectivenessô (δ) in the biological sense can be taken into account. Henceforth, directiveness implies a textual movement and movement means aiming in a certain direction. This supports the relation ($\delta\neq0$), which must hold if real time imaging (B. Bierschenk, 2002) shall come about in the process of depicting string rotation and grapheme production. In particular, when the condition of ($\delta=0$) applies, sense can be distinguished from non-sense. This circumstance allows the calculation of a rotational step of zero length. As a consequence, pre-multiplication of (a) with (**I**) breaks any symmetry relation at the dispension point.

$$\delta=\mathbf{I}a=1. \qquad (2)$$

Broken symmetries imply that the winding number cannot be zero around the dispension point (Winfree, 1980, p. 128) or a certain position since a ring structure most likely must enclose a singularity. This condition is marked with an unfilled dot in the space of Figure 2. Expression (2) marks, according to the mathematical convention, a counter-clockwise (and thus negative) rotation through which linearity disappears. On the other hand, Winfree (1980, p. 9) applies the convention of treating it as a ñpositiveò rotation.

Production (P) of a text may be characterized by its flexibility or stiffness, however within limits which refer to text internal properties which must maintain the constancy of its internal milieu. Text writing is a creative activity which concerns the effectiveness in off-setting any disorder of the AaO-mechanismôs internal functioning. Considered as óMouldingô (M) device of internal and external conditions, it is the individual text writer who performs according to the laws of nature. Law-boundedness can be expressed by the following vector and bivector relationship:

$$\mathbf{M}=\delta P=1. \qquad (3)$$

Considered as three-dimensional arrangement, Expression (3) is a torus (T^1), which is a new kind of directed number and called a trivector ($\mathbf{S}^1$) of dimension one. It follows that the ($\mathbf{S}^1$) has the capacity of preserving the impact of the scalar (δ). This is the necessary condition for the operation of any biologically determined text system.

The Objective as Focal Condition

The appropriateness of real time imaging means behavioural adaptation within the AaO system and that (δ) is responsible for the joint causation of supplementation (Supp) and expenditure (Exp) of energy. Imaging in this case means that any change of the initial circumstances need to correspond with changes in the individualôs text building behaviour in order to secure that the (Exp) variable becomes evident. Due to the assumption of its essential quality, it enters into the functioning of the mechanism however only as criterion. The occurrence of a direct hit on the target (i.e., a dummy, marking a hole in the textual surface) is expressed in the following relationship:

$$\mathbf{S}^1{}_O= \delta E=1 \qquad (4)$$

In this way the Objective gets its target definition ñas a 3N-dimensional object embedded in a (3N+1)-dimensional space, where the extra dimension corresponds to the value of the potential energy functionò (Wales 2003, p. 2). The trivector involved in the expression of the value, i.e. the target position, which has been illustrated in Figure 3 above has been integrated with the S-function, but the position in no way is causally entering in the determination of the mechanism. It is here where the concept ñfocal conditionò is particularly helpful. Thus, there must be given and specified firstly a set of placeholders (values concerning the identity function) and secondly an Objective (the focal condition), because the placeholders (the disturbances) are threatening to drive the behaviour of the mechanism outside the focal condition.

Directiveness as Determinant of Insight

Here the operation concerns the representation of intention (ι) as constitutive part of some *target*-oriented action. This requires a new trivector, which is obtained by pre-multiplying Identity (**I**) with (ι). The operation is producing the following relation.

$$\mathbf{S}^1_A = \iota\mathbf{I}=1. \qquad (5)$$

The resulting agency is formally defined as a concept which has an important function in the manifestation of the principle of directiveness. This new component is building on the solid fact that the outer product (ι∧ο) relate orthogonal. Moreover, (ι) and (ο) are commonly standing in perpendicular relation to one another. This means that the inner production space (ι•ο=0) is an efficient expression of this condition. The imaging of asymmetric processing of a work cycle (κ) is completely determined by the diagram of Figure 5.

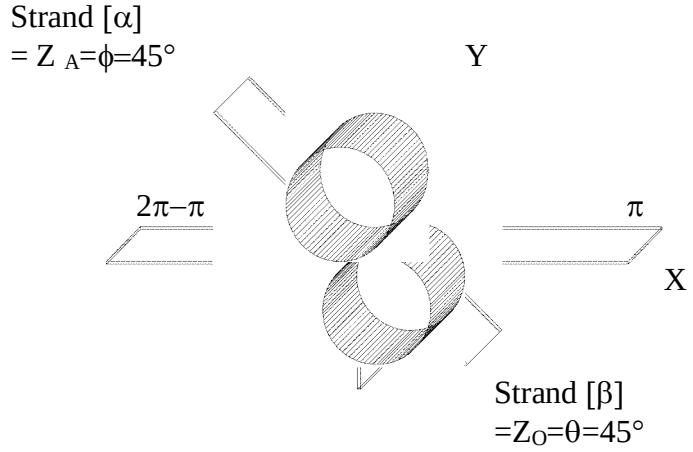


Figure 5 *Degrees of strand rotation*

Figure 5 builds on the assumption that affinity is the fundamental property of the AaO system. Furthermore, the degree of strand rotation gives expression to subtle but important differences between the time- and state-determined treatments of directiveness. Considered as $\mathbf{S}^1$-arrangement at the nominal level, the causal relationship (A∧O) ∧a) is just the torus of the step expressed in formula (3). Hence the following relation ((A•O•a) |X|Y|Z| cos θ)) shapes the functions of a text space as represented by the reference axes (X) and (Y) and axes of rotation (Z). Taking a step alongside (Z) means that any linear relationship will disappear.

The necessity of this kind of processing has been determined empirically. Thereby, the AaO-mechanism is steadily producing new forms of sequences of variables. Obviously, variables become displaced, which means that the production of graphemes must encompass the concept of ñheterochronic processing ò (B. Bierschenk & I. Bierschenk, 2004). Through dislocating strings of graphemes positional, new variables are establishing itself as a result of novel terminal states.

Determination of Singularities

The formation of termini is dependent on synthesis, i.e., the production of symmetry. As a result, symmetry is a consequence of non-commutative measurements and will be discussed in the context of translational invariance. At a certain given point in time, at least one isolated phase singularity may arise in a simultaneously evolving state space and constitute the basis for the formation of a terminus. When a terminus is defined as the local concentration of conserved information, the achieved translations make apparent that irreversible processes appear as stabilities, i.e., information invariants. Especially the impact of the translation function on already existing structural constraints will come into focus at the kinematic level. As a result, a relation must incorporate both the state and the dependency relation between termini.

Transiting through a state space is strictly controlled by the thermodynamic properties of its attractors. At the same time, the transformation process is integrating intention as well as orientation with the naming-function. Since this function exists only over time, it is also correcting itself. Repeated transformations and crossing of one sub-path with another is resulting in transformations that allow for the integration of the consequences of having found the structure of the naming-function. Thus, shifting experiences are provided during the transitions from one state to another. Integrated in the emerging configuration of names is the production of growing responsiveness. Thus, the generation of a terminating state must become recognisable through the name which is assigned to the corresponding attractor. Applying the space-concept to the study of separated A- and O-spaces not only requires that the existence of a language space can be hypothesised, but its existence must be demonstrated empirically.

The study of integrated strings of graphemes may be facilitated by imaging and describing the behaviour of translational superstrings without invalidating the kernel of the original Swedish paragraph:

/Titta på hur inställningen är idag, och det är ju inte bara bland de kommunalt anställda, de flesta tycker ju att jag har ju min lön, varför ska jag då hjälpa till med att komma på hur kommunen ska spara, det skiter väl jag i. Det är samma resonemang här./ [Text Producer: Swedish Municipality Official]

The way in which the operations of translation are influencing the outcome will be illustrated with the moulding into the *English, German, Danish, French* and *Italian* languages. Relating to the Swedish text, specific properties are emerging which provide for a strictly unified presentation of order-relations of the kind shown in Table 1.

In contrasting the produced state attractions with the states of the Agent (A) component, it becomes noticeable that the distinctions concerning their rockiness have generated only slight variations in the naming. However, what is remarkable is the depth of the root of the component. In penetrating this inequality, carrying the (-) sign, pronounced [***Obstinacy***] is easily apprehended. The shades in meaning correspond operationally to the degree of realised depth in the articulation. Hence, the resulting course is bending the

orientation towards a lack of alertness, vigour or energy, which at a minimum, is remoulding the precondition for work performance towards notorious non-fulfilment.

Table 1

Attractor states and names of the original Swedish text

Agent	*State*	*Fusion*	*Objective*	*State*	*Fusion*
Irritation	T_{A21}	*+50.583744*	Stiffness	T_{O17}	+43.108728
Superiority	T_{A15}	+48.2779	Superiority	T_{O15}	+42.763328
Self-sufficiency	T_{A19}	+44.7297	Rigidity	T_{O19}	+42.233228
Restraint	T_{A11}	+36.9425	Irritation	T_{O21}	+37.596378
Avoidance	T_{A10}	+20.642578	***Obstinacy***	T_{O27}	*-27.172622*

By beginning with the surface-oriented prismatic variations in the Agent (A) component, it can be noted that the displayed attractors are all carrying (+) signs. Hence, a substantial impact due to growing surface-dependent complexities seems to appear as growing rockiness. This means that the naming in the A-component is conveying [***Irritation***] as the essential property and thus, the fundamental root, extracted from the paragraph. An adverse conduct to the conditions of work, and the failure to comply comes through in the evolving path. The interplay between oneôs own [Superiority] and withholding of consent means operationally elaborated non-accessibility.

English text translation

Translating the Swedish text into English may have influenced the pick-up of the intrinsic tendencies from the original Swedish version. Expressed in experimental terms, the kinesthesis of writing as well as oneôs sensitivity to the context of a particular work environment may have gated the information pick-up.

/Just think of the common attitude today, and that does not go for local government employees only, most people think I have got my salary, why should I bother to come up with ideas as to how the local authority could save money, I do not care a damn. It is the same reasoning here. / [Swedish Professional Translator (EU-authorised): Dagny Persson, Subject Teacher at a High School in Lund, Sweden]

The translatorôs style appears to have contributed with unique twists in the English text and to preserve certain variations in perspectivation.

Table 2

Attractor states and names of the English text

Agent	*State*	*Fusion*	*Objective*	*State*	*Fusion*
Antagonism	T_{A13}	+49.421301	Untangled	T_{O21}	+64.128859
Mood	T_{A15}	+40.471931	Offensiveness	T_{O19}	+54.008259
Trend	T_{A17}	+40.446486	***Stiff-necked***	T_{O22}	*+52.727859*
Offensiveness	T_{A11}	+38.456199	Resentment	T_{O11}	+41.899040
Prejudice	T_{A21}	+25.357856	Antagonism	T_{O15}	+40.618059

Thus far, the underlying transformational shifts point towards untangled behavioural conduct. The naming of the root in the English text comes close to the original Swedish, named [*Obstinacy*]. From the point of view of the Swedish Official, it reflects sensitivity towards a certain annoyance and unpleasantness over absent performance, the expressed orientation conflicts sharply with administrative expectations. The root in the O-component implies [***Stiff-necked***] which implies that the resulting behaviour can only lead to the condition of [Offensiveness]. Absence of needed involvement and co-operation has emerged in which one is preventing oneself from feelings of empathy and sensitivity for domestic concerns.

Independent of distance in relatedness and meaning, the necessary intentional distinctness seems to be [***Prejudice***], which implies unyielding and is associated with the prevailing mainstream of off-setting any kind of responsibility. Compared to the [***Irritation***] emerging in the Swedish A-component, the deviations in the naming of the state attractors are pointing towards a bias in the perception of the given work conditions. At a minimum it can be concluded that the named root marks a general bending towards resentments.

At a minimum the termed singularities of both dimensions mark a lack of strength. Above all, the implied incapacity to propose possible solutions and thus produce ideas that can serve as a mainspring for action gives expression to the idling of many people. Hence, when the failure to produce solutions is transformed by problem solving requirements, the character of unyielding is associated with notorious non-fulfilment. The prevailing mainstream is off-setting any kind of responsibility. What is manifested in adverse judgements is a criticism of the conditions of work and the failure to comply with the work obligations.

German text translation

Of particular interest here is the fact that the English as well as the German translation has been carried out by one and the same person. This means that the translator context for the English and the German version is the same and that the biophysical constraints, thus far, are under experimental control.

/ Schauen Sie sich die Einstellung von heutzutage an, und es ist ja nicht nur unter den Gemeindeangestellten, die meisten meinen eben, ich habe ja mein Gehalt, wieso soll ich denn mithelfen, Wege zu finden(,) wie die Gemeinde Geld sparen könnte, das ist mir doch völlig egal. Es ist das gleiche Denken hier. / [Swedish Professional Translator (EU-authorised): Dagny Persson, Subject Teacher at a High School in Lund, Sweden]

The German translation has been carried out after the English one which may have influenced the way in which the translator has become adjusted to the task. Translating a second time may have been influenced the apprehension of constraints. The kinesthesis of reproduction may give a hint on the informational distance between the English and the German translation. The achieved remoulding is observable in Table 3.

Table 3
Attractor states and names of the German text

Agent	*State*	*Fusion*	*Objective*	*State*	*Fusion*
Clumsiness	T_{A17}	+39.304302	Clumsiness	T_{O17}	+50.19061
Prevention	T_{A23}	*+38.441520*	Prevention	T_{O21}	+44.45771
Reluctance	T_{A15}	+37.550458	Reluctance	T_{O15}	+44.41301
Aversion	T_{A13}	+34.033658	Omission	T_{O13}	+38.72961
Omission	T_{A11}	+30.140058	***Displeasure***	T_{O23}	*+34.84812*

In penetrating, the O-component, super-symmetry in orientation is easily apprehended. The name [***Displeasure***] is in terms of gravity, balancing between deep-seated attractions and the observed rockiness. Compared with the previously produced relations [Obstinacy] and [Stiff-necked], observed in the English translation, the German O-roots point to a failure to meet the terms and determine structurally elaborated non-fitting.

As it appears in Table 3, the name [***Prevention***] of the root of the A-component marks a noticeable clashing with the expectations of the local authority. Apart from demonstrating explicitness in the key functions [Clumsiness] and [Reluctance], sensitivity to hindrance remains high. This kind of deficiency is in parity with the previously observed absence of cooperation and accomplishment. Hence, the discovered intention, is guiding the interplay between averseness and decline in the acceptance of a work obligation. Expressed in experimental terms, the German translation contributes consent to the previously discovered [***Irritation***] and [***Prejudice***] which implies an affront (=offend) in not recognising the presence of an obligation to work.

As it appears, the intentional relations of the A-component remain as highly explicit. However a certain remoulding can be observed. Apart from demonstrating the reappearance of the key terms, remoulding signifies the emergence of a shift towards lack of involvement and needed co-perception. Generally speaking, a condition has emerged in which one is preventing oneself from feelings of empathy and sensitivity for domestic concerns.

Danish text translation

In communicating differently depicted attentiveness, especially when compared to the original Swedish version, a particular outlook may become apparent due to the Danish translation. Differently spaced shifts vis-à-vis the perceived affordances are of course influencing textual development and growth in the Danish paragraph.

/*Se hvordan indstillingen er i dag, og det er jo ikke kun blandt de kommunalt ansatte, de fleste synes jo at jeg har min løn, hvorfor skal jeg så hjælpe kommunen med at spare, det skider jag på. Det er samme ræsonnement her,/ [Translator: Danish Research Assistant in Rhetorics, Mette Poulsen, Dept of Psychology, University of Copenhagen at Copenhagen, Denmark]*

Since the names are further measurements of the way in which the Danish translator has put the original text into her own perspective, certain selective changes have been produced in the constraints. The selected states and names of the Danish version are reproduced in Table 4.

Table 4
Attractor states and names of the Danish text

Agent	*State*	*Fusion*	*Objective*	*State*	*Fusion*
Stubbornness	T_{A19}	*+43.121822*	Mismatch	T_{O17}	+57.46039
Indifference	T_{A13}	+41.027144	Indifference	T_{O13}	+53.69745
wrong Willingness	T_{A11}	+37.478944	wrong Willingness	T_{O11}	+48.29665
Restraint	T_{A9}	+29.691744	Restraint	T_{O9}	+44.24605
Confidence	T_{A7}	+24.632905	***Stubbornness***	T_{O19}	*+42.59294*

In turning to the differences between orientation and intention, it becomes evident that the termini relate lawfully to aspects of non-accountability. This means that the terms are

capturing the fundamental idea of the paragraph, but are also addressing differently convoluted regions in the landscapes.

Compared to the previously reported state attractions, the Danish translation seem to have converged on [***Stubbornness***] as the key function of the roots of both the O- and the A-component, respectively. From the community point of view, this implies either maladjustment or disturbingly different manners compared to what authority is expecting from its employees. Intentionally, the Danish attractions appear to strengthen particularly [wrong Willingness]. In turning to the similarity in the named relations, it becomes evident that the O-component is mirrored in the A-component lawfully and substantially. The only difference appears in the amplification of [Mismatch].

French text translation

Based on the hypothesis that language resemblance is no guarantee that their landscapes show comparable sameness in every respect, two languages within the Roman family have been approached.

/Parlons de l'attitude d'aujourd'hui, et c'est pas seulement parmi ceux qui travaillent à la commune, la plupart pensent que puisque j'ai mon salaire, pourquoi donc aider la commune à trouver des moyens pour faire des économies, ben je m'en fous. C'est le même raisonnement ici. / [Translation: Charlotta Nord: Subject Teacher at a High School in Lund, Sweden]

Attention through translational efforts is expected to generate some sophisticated differences. Each and every relation between terms works towards unification. How different constraints operate in the French version is manifested in Table 5.

Table 5
Attractor states and names of the French text

Agent	*State*	*Fusion*	*Objective*	*State*	*Fusion*
Profit	T_{A11}	+42.702123	Repulsion	T_{O16}	+55.362827
Sameness	T_{A17}	*+42.108767*	Inefficacy	T_{O14}	+54.577827
Exploitation	T_{A9}	+39.185283	Impediment	T_{O12}	+48.768827
Indifference	T_{A7}	+32.993283	***Obstinacy***	T_{O20}	*+13.376457*
Community	T_{A5}	+21.864570	Inaccessibility	T_{O18}	+46.298657

Covered by a conceived common attitude, the emerging root in the O-component is [***Obstinacy***] which implies a failure to meet the task demands. Clearly, the translator seems to have sensed a clash between public and private concerns. Judging from the fusion values of the O-component, the same fundamental condition of incompetence and unwillingness to integrate is dominating the Objective. The final attraction is enlarging the sensed deficiency further and is focussing on non-fitting behaviour. The latter indicates that order and performance of the local system appears to be corrupted and consequently impaired.

An egalitarian style of conduct, grounded in an adjustment to common opinion is implied by the root [***Sameness***] of the A-component. Already Hardin (1968) wrote that an analysis of the problem of *how to legislate temperance* requires that *the morality of an act* is conceived of as *a function of the state of the system at the time the act is performed*. Compared to the previous translations, the intention to make a [Profit] has been absent but marks a distinctive sensitivity to [Exploitation]. In conclusion, the peaks of the concentration spaces point towards a certain degree of boldness. This means from the egalitarian point of

view, that *most people* are not liable to be called to account by the local authority. This appears to cause the failure to meet the demands of the [Community].

Italian text translation

Each translation is building up unique variations concerning themes and motifs. In comparison to the French text, the Italian translation is to a certain extent essentially the result of an elaborated writing style. The aim with the Italian text has been to provide a contrast to the French text. Since the constraining effects appear and operate differently at the thermodynamic level, the generated differences in the structural relationship will be reflected with the following text.

/*Guarda com´è l´opinione oggi e non è soltanto tra i dipendenti comunali, la maggior parte pensa che io in fondo ho il mio stipendio, perché allora io devo cooperare al fine di fare risparmiare il comune, non me ne frega niente. È lo stesso ragionamento che si fa qui./ [Translation: Elisabeth Palazzi: Subject Teacher at a High School in Lund, Sweden]*

The acceleration in a particular textual part is thereby expressing progress which is governed by internal constraint. The autonomous treatment of the translation is generating sophisticated differences. As shown in Table 6, the root in the O-component is [***Obstinacy***] which implies that order and functioning of the social security system becomes corrupted and consequently impaired by breaking the rules.

Table 6

Attractor states and names of the Italian text

Agent	*State*	*Fusion*	*Objective*	*State*	*Fusion*
Nonfeasance	T_{A23}	*+47.364047*	Nonfeasance	T_{O17}	+53.525010
Indolence	T_{A15}	+45.097923	Recession	T_{O15}	+53.289206
Indifference	T_{A11}	+34.513047	Deception	T_{O19}	+49.276250
Security	T_{A7}	+23.058303	Indolence	T_{O13}	+43.966376
Mood	T_{A5}	+18.191303	***Obstinacy***	T_{O21}	+30.942450

A theoretical momentum to some disorder relations becomes clearly expressed by contrasting this pronounced relationship with the observable [Deception]. Close to this peak is the neighbouring [Recession], which in purpose and manners is a further sign of disorder. The degree of sensed disorder is giving a hint on the perceived spirit, especially when the work force is taking part in a highly developed welfare system. It appears that the attraction is revolving around non-accountability concerning the fulfilment of a work-task. The produced and differently convoluted dependency relations are very clear expressing the solid fact of antagonistic manners.

Apart from the demonstrated mirror effect of [***Nonfeasance***] as key function in the A-component, this terminus is invalidating any standards of excellence. In terms of the fusion dynamics, the latter is approachable as a certain kind of inflexibility. Another remarkable mirror effect appears in the A-component which is preserving [Indolence] as an expression of non-liability. Much of the gravity in the perspective variation is bound to the tip at [Indifference]. The other distinct peak seems to hold [Security] to be the source of the failure to meet demands. The implication captured is an intentional disinclination, resulting in incapacity to cope with local duties. Finally the expression of vacillating behaviour and

weakness in disposition implies an absence of a feeling for responsibility. Hence, the individual states are directing attention towards articulated hindrance due to a certain [Mood]. Thus, emerging is the formation of a value judgement, namely a judgement on the quality of oneôs community employment.

Discussion

The validity of the computational solution to a language equation comes from the processing itself, but requires always the presence of a structured context. Since the state attractors are the consequences of processing, their termini have important theoretical implications concerning the conservation of information. As a logical consequence, a solution becomes determined not only by the termini but also by the landscape-embedded configuration. However, the maintenance of its non-equilibrium properties through symmetry-breaking operations allows the manifestation of the context-embedded structures. For assessing the import of emergent state attractions, it is essential to conceive the variations in the development of their naming paths as result of natural changes in degree of complexity.

All natural text production is necessarily the result of breaking or lowering the influence of the order parameter all the time. Balancing the operating processes in the present study implies the working of the reversibly synthesising [AaO] mechanism, based on self-reference and the coupling of the language structure with system dynamics. The naming of the global or final state attractions is summarized in Table 7.

Table 7
The commonalty of the A- and O-roots

Language	*Agent/Motif*	*Objective/Theme*
Swedish	Irritation	Obstinacy
English	Prejudice	Stiff-necked
German	Prevention	Displeasure
Danish	Stubbornness	Stubbornness
French	Sameness	Obstinacy
Italian	Nonfeasance	Obstinacy

Objective

In contrasting the termini of the produced paragraphs, it is observable that the discourses have generated an impressive commonalty in the *Objective* component. The moulded and remoulded attractions have manifested a particularly high degree of structural (i.e., terminological) stability and thematic uniformity in the developments. Hence, the self-referential property is generating structures which are carrying important theoretical implications. However, one more step is needed in the endeavour to trace the core idea of the paragraph.

Testing for the c*ommonalty* in the *Agent* component means that the mirroring effect comes into focus. Since a first step had required that the A-O-pairs become divided, it would not be unreasonable to expect that this measure would destroy the strict dependency in the coordinative cooperation of the components. Furthermore, if this measure would produce incomprehensible results it would mean that it is difficult to explain emergent commonalties in a reasonable way.

In contrast to the uniformity, reflected through the termini of the *Objective* component, the results mirror some slight variations concerning the motifs extracted from the paragraphs.

Especially against the background of the uniformity in the abstracted themes, it is noteworthy that the translations are producing variations in picking up the intention.

Agent

Swedish

Irritation in the original dimension of intention reveals the inclination towards a lack of alertness, vigour or energy, which at a minimum, is a precondition for work performance. An adverse conduct to the conditions of work, and the failure to comply comes through in the remoulded path. The interplay between refusal and decline of the acceptance of a work obligation involves withholding consent and implies an affront in not recognising the presence of a proposal. This resistive import means a structural elaboration of non-accessibility.

English

Prejudice is finalizing the dimension of intention. The English translation comes very close to the Swedish original since it is reflecting sensitivity towards a certain annoyance and unpleasantness over the absence of performance. Generally speaking, a condition has emerged in which one is preventing oneself from feelings of empathy and sensitivity for domestic concerns. Underlying transformational shifts reveal a lack of involvement and needed co-perception. The expressed style and values conflict so sharply that the resulting dimension of intention cannot support proper solutions. Ineffectiveness and non-commitment are marking broken ties to the domestic system.

German

Prevention has become evident as the final terminus. This kind of deficiency is addressing non-commitment. Intentionally, the named state attraction is reflecting the absence of accomplishment. The seriousness in the inconsistency marks a noticeable commonalty in clashing with the local authority. Independent of distance in relatedness and meaning, the intention in the German translation is contributing by withholding consent which implies an affront in not recognising the presence of a proposal.

Danish

Stubbornness comes through and is, apart from demonstrating its key function, addressing the discomfort that is produced by an inflexibility, which is invalidating any standard of excellence. The twist in intention towards the failure to perform makes the shortcoming evident. As it appears, with slight variations in the naming, the intentional relation remains over the first four translations.

French

Sameness implies an egalitarian style of conduct, which is grounded in an adjustment to common opinion. As a source for meeting the demands of local government, this kind of perceptiveness is necessarily resulting in a very low probability of successful performance. As final or global state of attraction, the named terminus communicates namely a need for being treated alike. Hence, covered by a conceived common attitude, the interplay between efficacy and self-interest is the root to the failure of meeting the demands.

Italian

Nonfeasance is capturing the import of the final state attraction. It marks an intentional disinclination resulting in incapacity to cope with local assignments. Showing no

sense of responsibility leads to the final expression of vacillating behaviour and weakness in disposition. In terms of gravity, these are most deep-seated and mirror the same fundamental global outcome as the Danish translation. However, a certain remoulding is observable. Apart from demonstrating the reappearance of a key function, which invalidates any standard of excellence, ineffectiveness is in focus. Order and functioning of the local system is corrupted and consequently impaired.

In conclusion

In searching the naming path of a particular landscape for novelty in the named relations, the thermodynamic description may be conceived of as an evolutionary search tool. Since each and every region is building up its own unique development, each and every sub-structure will reflect state attractions concerning themes and motifs. Besides their capacity to work towards unification, they have converged on the same kind of global state attractions. The functional relations between the terms reveal roughly the same sequential developments but within certain translator-specific variations which, however, are only natural since the translators are variably responsive to the structure of the original text. The major outcome shows nevertheless that the structure, mediated through the produced translations, indicates that the kernel remains over both dimensions. It is worth remembering that the (AaO) axiom stipulates that the *Agent* must get its description through the *Objective*, an axiom which finally has been validated empirically by an impressive commonalty.

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